

Table A17. Equations for public elementary and secondary teachers

Dependent Variable			Equation			R ²	Durbin-Watson statistic ¹	Estimation technique ²	Rho	Time period
Elementary	ELTCH	=	91.8 + 1.8SGRANT (6.8)	+ 0.03ELENR (3.7)		0.99	1.7	AR1	0.99 (56.6)	1960 to 2001
Secondary	SCTCH	=	75.7 + 1.5SGRANT3 (14.7)	+ 0.03SCENR (7.6)		0.97	1.7	AR1	0.66 (5.0)	1965 to 2001

¹For an explanation of the Durbin-Watson statistic, see J. Johnston, *Econometric Methods*, New York: McGraw-Hill, 1972, pages 251-252.

²AR1 indicates an estimation procedure for correcting the problem of first-order autocorrelation. For a general discussion of the problem of autocorrelation, and the method used to forecast in the presence of autocorrelation, see G. Judge, W. Hill, R. Griffiths, H. Lutkepohl, and T. Lee, *The Theory and Practice of Econometrics*, New York: John Wiley and Sons, 1985, pages 315- 318.

Where:

ELTCH = Number of public Elementary classroom teachers, in thousands

SCTCH = Number of public secondary classroom teachers, in thousands

SGRANT = Education revenue receipts from state sources per capita

SGRANT3 = Education revenue receipts from state sources per capita lagged 3 years

ELENR = Number of students enrolled in public elementary schools, in thousands

SCENR = Number of students enrolled in public secondary schools, in thousands

NOTE: R² indicates the coefficient of determination. Rho measures the correlation between errors in time period t and time period t minus 1. Numbers in parentheses are t-statistics.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Elementary and Secondary Teacher Model.

(This table was prepared July 2003.)